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ABSTRACT

Though the resources devoted to educational research are small compared to those devoted to teaching, there is a considerable amount of literature classified as educational research. However, it is still difficult to show a relationship between educational research and the improvement of teaching, and there is not yet an account of the role which university and large-city school district research organizations have played in (a) forming the urban school bureaucracy, or (b) advancing or retarding educational efficiency. Nor has the advent of educational psychology, although it has grown tremendously, produced unity of method or purpose in educational research. One way to begin assessing the impact of (a) educational research on schooling, and (b) schooling on research would be to list 10 studies which seem to have made a difference in schooling, and to examine each one in terms of its rationale, purpose, and accomplishments. Such a list is included in this paper. Among those studies cited are (a) the Thorndike-Woodworth studies of 1901 on the transfer of training, (b) Thorndike's work on arithmetic and the Thorndike-Barnhart dictionary, (c) school surveys, (d) Cubberley's work on the appointment of school funds, and (e) retardation and elimination studies. Significant trends in the history of educational research are also reviewed. (HMD)

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Assessing the Impact of Research on Schooling:
A Problem in History of Education,
Its Difficulties and Approaches.

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For those of us who have been in the history of education business for the last ten years or so, the revision story needs but little review. The old textbooks and histories in the genre of Cubberley gave way to a series of new and even newer ones. First, we had to produce histories to show why the alleged deterioration of American public schools was indeed unfortunate¹ or not the fault of public school personnel but the fault of American society as a whole.² Very soon we were to embark upon a version of history of education which was in many ways indistinguishable from the history of American culture "writ large"; and the crucial distinction between education and public schooling became blurred.³ These histories served us very well as long as our society and schools were making ready for sub-orbital, orbital, and moon shots and preparing a new technical elite to transform planet earth into spaceship earth.

What some of us have overlooked is that in the post World War II years, the schools had a new task--a task different from and in addition to the sorting and training of the new technical elite. Simply stated the task was to serve a clientele it never really had to serve previously. We had reached a point in our industrial development where we could no longer rely upon the marketplace to finish the job of socialization and elementary job training for those who found the schools uncomfortable or not suited for their needs and purposes. The marketplace demanded the equivalent of successful completion of high school.⁴ For a short while this new demand was set aside while we attended to the Sputnik signals.

The new school population--we invented a variety of names for it such as the poor, the disadvantaged, social dynamite--would not remain docile for long. Very quickly the new population was heard and the politics and priorities of American society were rearranged. There was seemingly a surfeit of ideas, enthusiasm, hope, money, and even honest belief that the New Deal could indeed be finished. The Great Society was announced, and it was incumbent upon us to find new ways of schooling new folk. Schools faced the task of servicing a broader range of clientele with a broader range of programs and procedures. To compound the new situation, the sons of the affluent became overstimulated and bored just as the poor demanded their share of "the great American barbecue".

Public schools had just completed their adjustments to the new math, the new science, the advanced placement test, programs for the gifted, reconstruction of language laboratories, and the up-grading of personnel. Now they were faced with a new set of pedagogical, curricular, organizational, administrative, and political problems. Neither the change nor the success was immediate. The turn-around time needed to deal successfully with the new folk revealed an essential characteristic of any large bureaucracy--its inertia.⁵ Historians of education, apparently influenced by the criticisms of the newly articulate poor and many of their self-appointed spokesmen set out to revise the revisions and focused their attention and historical skills and insights on urban school bureaucracy and documented the school's role as the handmaiden of the corporate industrial state.

The Neo-revisionists,⁶ as ideological as they were and are, have nonetheless rendered us a considerable service. The revisionists took our attention away from public schooling. The neo-revisionist brought it back. In the process, they reminded us that schooling is indeed a vast enterprise in the United States and emphasized that most views of it have been from the top down. Since then, we have learned how difficult it is to secure a picture from the bottom up. The neo-revisionist picked up the work started by Raymond Callahan in 1963 and carried it a step further. Callahan has essentially recorded the transition of the school administrator as a supervisor of instruction and teacher trainer to that of a manager. Recognizing that the past could not be re-captured, he urged that the administrator become an applied social scientist of sorts. The neo-revisionists seem to have rejected each of three roles and in their most extreme form have opted for the virtual abolition of schooling. In the process, they may have overlooked one of the more important props of the school bureaucracy--educational research.

As we move from attempting to use history to inspire social and educational change to attempting to assess why and/or how change was facilitated or retarded by public schools, it will be necessary to examine the relationship of educational research and the schooling enterprise. It may even be more accurate to view the enterprise of schooling as a series of inter-related institutions (though frequently dysfunctionally related). The major members of the series would include: 1. public school systems; 2. teacher training institutions; 3. universities which claim not only to train educational personnel but also to strengthen the knowledge base of practice through their research endeavors; and 4. governmental and non-governmental agencies which advocate and sponsor improvement, change, development, and research efforts directed at the enterprise of schooling. Within each of these divisions there are varying degrees of commitment to research and even institutionalization of research efforts. Institutes and bureaus of educational research, organizations such as AERA, programs requiring research competencies, and programs for the training of researchers all may be viewed as support systems for these members.

Though the resources and personnel devoted to research compared to teaching are indeed small, there has nonetheless been a considerable body of literature (about which more will be said later) classified under the heading of educational research and comparable attempts to convince and train educational workers in the merits and ways of educational research. How the sub-system of educational research got its start and has grown, how it has been shaped and how it helped to shape what we now call the school bureaucracies are questions for which we have neither comprehensive or interpretative histories. To date, there is still difficulty in showing how our most basic task--teaching--has been improved by educational research. As able an historian of education as Geraldine Joncich Clifford has concluded "that a history of the impact of research on teaching must be content with indicating how teaching may have been associated with scientific ideas rather than with proving that they actually have been so associated or that the association was prepotent."⁷

A complete history of educational research would include a study of the development of bureaus of educational research in state universities and urban school systems during the progressive era, the introduction of scientific and quantitative methodologies into the curricula for the training of educational

personnel, the increase of specialization within the schooling enterprise and the changes in the problems, strategies, and techniques of educational research. It would also include an inspection of the claims that educational researchers have made and the expectations we have had of educational research. For example, how is it that we have moved to accepting the claim that research will increase basic understandings of educational problems from believing that it would actually improve the quality and efficiency of school practices and even contribute to the making of a better social order. It would have to pay even more attention to the attempts to answer, dismiss, or beg the "pedagogy-as-a-university-discipline" question. Finally, it would have to take note of what is a relatively short but massive and complicated history.

The magnitude of the educational enterprise and the relatively short time it took to grow cannot be overlooked, for in this rapid growth we may find the explanations for why resources and personnel are allocated the way they are and why some functions and conceptions dominated others. By 1970 there were over 1100 colleges and universities offering work toward the bachelor's degree in education. During the 1970-71 academic year, 176,571 bachelor's degrees were awarded and 95,114 advanced degrees--88,716 master's degrees and 6,398 at the doctoral level.⁸ In 1963 there were nearly 38,000 full-time senior staff members engaged in teaching and organized research in education. The senior staff was supplemented by approximately 2,000 full-time junior staff. The full-time staff was augmented by over 15,000 part-time staff members. The breakdowns of the staff show an overwhelming amount of effort devoted to "resident instruction and departmental research" in contrast to the effort devoted to "organized research": 662 full-time senior staff devoted to research and 37,099 full-time senior staff devoted to "resident instruction and departmental research". That is 1.5 percent devoted to "organized research".⁹

The 1971 PDK-AACTE study of the doctorate in education identified 124 universities which granted the doctorate in education during the years 1965-69. Within these institutions there were 98 Ph.D. and 27 Ed.D. programs. Classification of the programs by area of concentration revealed 31 areas.¹⁰ The beginning of this massive production of degrees and education professors began less than a hundred years ago. James B. Angell's much celebrated appointment of William H. Payne to the chair of "the Science and the Art of Teaching" was announced in 1879. The first Ph.D. degree awarded in Education was in 1898 by the University of California at Berkeley. (The first Ed.D. degrees were awarded in 1922 by Harvard and Northwestern University.)

The interest of the universities in pedagogy as a university discipline and the science of education was coincident with its recognition that it had to help prepare teachers for the growing secondary schools. By 1890, the high school was the most frequently attended type of secondary school. There were 1,026 high schools in the entire United States in 1870, and they enrolled some 72,000 students. By the end of the nineteenth century, the number of secondary schools had increased sixfold, and their enrollment was nearly 520,000.¹¹ New high schools were being built at the rate of more than one a day between 1890 and 1918. During the same period, 1890-1918, attendance in high schools increased 711 percent while the entire population increased 68 percent.¹²

Before 1890, if so fine a line can be cut, pedagogy was a branch, at best, of moral philosophy. After 1890, as it was making its bid to become a university

discipline there were two major options. One was to follow the way of the newly arrived psychology which had just severed its ties with philosophy and attempt to become something like an empirical science. The other option which was alive for a short while was the Herbartian program. As we know, the Herbartian Society and the attempt to create a rational science of education within the confines of the university and particularly the graduate school, were short-lived. John Dewey and psychology won the final contest and divided the spoils. However, it is fair to say that the method of teaching, the setting for the training of teachers the Herbartians proposed, and their way of uniting practice with theory, as described by Charles DeGarmo in Herbart and the Herbartians (1895), persisted for quite some time in the normal schools and later in the state teachers colleges. It may be the case that our continual uneasiness about how we handle internships is a legacy of this tradition. Seen in the Herbartian context, the often heard complaint of teachers that our theory does not relate to teaching may be a complaint that we substitute learning theory for teaching.

The Herbartians, like the earlier proponents of Pestalozzianism, were popular precisely because they offered school people a way to conceptualize their function and organize and execute their instructional tasks. Their program provided an aim of education, a justification for the selection of subject matter, and a method which seemingly had universal application. They offered their program just as the common school was being extended and expanded not only in terms of its length and student population but also in terms of its functions. The common school was fast becoming the institution for social amelioration designed to build a secular morality and to insure that measure of ideological unity necessary for law and order. Consequently, it grew rapidly and as it grew, it became necessary to create a veritable army--the metaphor is theirs--of teachers equipped with proper and uniform methods. The immediate problem was that the army had to be raised, trained, and supplied. The mechanisms had to be invented. The pedagogical quartermasters who were to outfit the great army of teachers were drawn from the legal and political--indeed what was to become the social bureaucratic--structure. They were the superintendents who visited schools, supervised instruction and in many instances trained and certified teachers. However, as the enterprise grew the duties shifted and changed. Universities assumed the responsibility for teacher training--at least for the secondary schools--and the superintendent of necessity became a manager.

Administrative and supervisory positions inevitably grew. For the year 1889, according to the U.S. Commissioner of Education, 484 cities reported an average of only 4 supervisors per city. However, between 1890 and 1920, as Tyack has observed, the growth of supervisory positions was phenomenal. It increased from 9 to 144 in Baltimore, 7 to 159 in Boston, 31 to 329 in Detroit, 58 to 155 in St. Louis, 235 to 1,310 in New York, 10 to 159 in Cleveland, and 66 to 268 in Philadelphia.¹³ To support this new class of functionaries city school systems founded bureaus or departments of educational research. Universities did likewise. Writing in 1928, Walter Scott Monroe reported that before 1918 there were eighteen bureaus or departments of educational research in public school systems and only seven such organizations in teacher-training institutions. By 1925 there were sixty-nine bureaus in the school systems and twenty-nine in teacher-training institutions.¹⁴

The specialization of administrative and supervisory personnel extended down through the ranks of the teachers. As the diversity of students and their needs

increased with the growth of the total school population, the need for special programs became more apparent: programs for the retarded, physically handicapped, the delinquent, and the gifted as well as special programs with vocational emphases. States quickly revised and differentiated their certification standards and categories. "In 1900," Tyack has observed, "only two states had specialized credentials; by 1930 almost all states had elaborate certification laws."¹⁵ By 1916, for example, Teachers College gave its student a choice of work leading to specialized diplomas for fifty-five different positions.¹⁶

Though the research bureaus produced innumerable studies and reports, there is no systematic account of the role they played in forming the urban school bureaucracy and either advancing or retarding "educational efficiency". The era of their origin, the density and diversity of the population the school was attempting to serve, and the success of the Army with the Alpha intelligence tests do seem to have somehow conspired to direct many of their efforts toward the administration, scoring, and reporting of testing results. In many instances they appear to have been established to perform on a continuing basis that function which the school surveys were performing. Investigation is needed to determine how much of their effort was directed toward matters of curriculum, learning, and teaching compared to the effort expended in gathering data relevant to school plant, finance, population growth, record keeping, and filling out questionnaires.

The bureaus of educational research established within universities appear to be not fundamentally different from the public school bureaus, at least during their first years and upon first inspection. Couglas E. Scates, writing in the first Encyclopedia of Educational Research (1941), noted that the school bureaus and the university bureaus were started at about the same time.¹⁷ In the revised edition of the Encyclopedia (1950) he reported that the university bureaus were founded "as part of the same fundamental movements that put them in cities and other organizations, namely a developing interest in measurement and a growing confidence in objective research."¹⁸ Gustav J. Froehlich's account of the bureaus in the third edition is more precise about the functions and accomplishments. He related that the studies of the city bureaus "very frequently are 'administrative' studies on such subjects as enrollments and population trends and projections, salaries, class size, personnel and staff, age-grade relationships, marking and grading practices, promotion policies, and teacher load."¹⁹ About the university bureaus, he made the following observation: "Most of the outstanding research bureaus in institutions of higher learning are better known by their works than by a description of their work; for example, child study is prominently associated with research centers at California, Chicago, Cincinnati, Iowa, Michigan, Minnesota, Toronto, and Yale; curriculum studies with George Peabody College for Teachers; statistical procedures with Chicago and North Carolina; testing with Iowa and Kansas State Teachers College; fundamental work in psychology and experimental education, as well as in administrative studies, with Teachers College of Columbia University."²⁰ Scates made a similar observation in the second edition when he suggested that "those university bureaus which have been established to study child development and welfare seem on the whole to have worked on rather more fundamental types of problems."²¹ Froehlich noted that the lack of communication among bureaus and the lack of dissemination of their findings was severe, for of sixty-two operating bureaus only eight maintained regular publications of their own.²² In many instances both school and university bureaus seem to have gathered all sorts of facts in the interest of providing data for administrative decisions or to help school

personnel in the field by sending them answers to questions which were frequently received via the mails.²³ It may be that these bureaus created during the "hey-day of empiricism" were well protected hives for those whom Charles Brauner has called "fact-gathering worker-bees."²⁴ The fourth edition of the Encyclopedia does not specifically deal with school and university research bureaus, under the heading, "Research Organizations", Nicholas A. Fattu has observed that "the study of research organizations is conspicuously limited."²⁵

Brauner's characterization of the second and third decades of educational theory and research may not be very flattering to the participants. It is, however, suggestive of what the two striking characteristics of the era were: productivity and confusion. What constituted educational science or educational research was an unresolved question. Yet, the period was one of remarkable production. In his first years at Harvard, for example, Professor Hanus was to claim there were not enough materials and literature on pedagogy.²⁶ By the 1920's there could be no such claim. By 1913 when Paul Monroe's massive Cyclopedia of Education was completed, the key concepts and terms of the field had been selected and clarified. "Considered against a background of the primitive state of such social sciences as anthropology and sociology in 1912", Brauner has written, "the Cyclopedia seems to contain within it the whole of education as an intellectual discipline." It stabilized "the language for talking about education, both with regard to the terminology employed and to the meaning of complex content."²⁷

"Quantity production" is the term Walter Scott Monroe used to describe his review of educational research for the period 1918-1927. What is interesting about Monroe's review is his pre-occupation with and enthusiasm for what seemed, and probably was, a remarkable growth in the literature dealing with education. Production could be counted and classified even though, to use his words, "an authoritative definition" of educational research was "wanting". The definitions so varied that "for the most part they cannot be used as criteria for identifying educational research." That "much of what is labeled educational research probably is not research," admitted Monroe, "does not appear to invalidate the use of the term 'quantity production'."²⁸ Monroe's enthusiasm and description were to be repeated in The Scientific Study of Educational Problems which he published with Max D. Engelhart in 1936.²⁹ The characterization "quantity production" was used again in B.O. Smith's article, "Science of Education", in the second edition of the Encyclopedia of Educational Research.³⁰

Production of instruments, literature, and degrees has continued to grow in education. Likewise, discussions about whether education is a science, a field, a profession, a discipline, or none of the above have continued. Attempts to employ quantitative techniques and to refine those techniques seem to constitute the tack which has been taken to avoid the more basic questions. However, during the last seventy-five years a variety of positions seem to have dominated from time to time. There are a variety of styles and like all styles some are more fashionable then and others now. Discussions call for improvement, for more basic research, for more applied research. Other discussions claim educational research is a social science or an applied social science. Though it should be observed that the distinction set forth in the Cronbach and Suppes volume--especially that between conclusion oriented and decision oriented research³¹--do render many of the old discussions somewhat arcane, historians probably ought not to try to settle these questions. They should, however, be attempting to explain the variations found in the chronicles of educational research.

Unity of method or purpose in educational research was not forthcoming from psychology, or even more strictly speaking, educational psychology. From the very beginning, as it were, there was considerable doubt that psychology did related to education, especially to that part of education called teaching. Moreover, psychology had to put its own house in order--as recently furnished as it was. Even before Dewey and Titchener were debating whether the true psychology was functional or structural, James was doing his best to dispel false hopes. In his Talks to Teachers (1892), he tried to explain to the teachers that the "new psychology" had "become a term to conjure up portentous ideals withal; and you teachers, docile and receptive and aspiring as many of you are, have been plunged in an atmosphere of vague talk about our science, which to a great extent has been more mystifying than enlightening."³² Because psychology was a science and teaching was an art, it was not possible to "deduce definite programmes and schemes and methods of instruction for immediate schoolroom use." Teaching could not be subordinate to psychology, though the two did need to agree ultimately. Even in the case of Herbart, James related, where the "advancer of the art was also a psychologist, the pedagogics and the psychology ran side by side, and the former was not derived in any sense from the latter."³³

About educational psychology, James seems to have had minimal expectations. Perhaps, others' expectations were too great. In his 1930 autobiographical statement for the Murchison volumes, Charles H. Judd reported that hindsight lead him to believe that his "early efforts to formulate systematic treatises in psychology were premature." About educational psychology he was even more certain: "In educational psychology, especially, there was not enough material at hand to justify a textbook." He went on to relate an incident with William James about the very same subject. It goes as follows:

In this connection I recall a remark made by James once when a group of us were watching the sun set behind the mountains in the adirondacks. James had come for a short visit to the camp and was, as usual, the center of the group. He had recently published his Talks to Teachers on Psychology. In the course of the evening I asked him what he thought of educational psychology. "Educational psychology," he answered, "I think there are about six weeks of it."³⁴

Clearly, educational psychology now takes a few more than six weeks. Whether the content has expanded or whether we continue to take our observations about pedagogy and elaborately wrap them in psychological garb are questions for historians of educational thought and ideas.

Nearly twenty years after James' remarks about educational psychology and as education was moving into its "survey" period, V.A.C. Henmon of the University of Wisconsin had to report that educational psychology had recently been depicted as "a pretentious humbug that has grown like an excrescence on the body educational."³⁵ By 1912, when Henmon wrote, there were at least five kinds of educational psychology courses offered to prospective teachers. They were:

1. Principles of teaching based on psychology, in which psychological conceptions are applied to educational practice. Concrete and practical problems

arising in school work are interpreted in the light of psychological principles.

2. Psychology of the various school subjects--an analysis of the mental processes involved with reading, writing, spelling, arithmetic, etc., with the practical applications to teaching.

3. Selected topics from genetic psychology and child study, with a view to tracing in broad outline the normal mental development from childhood to manhood.

4. Selected topics from general psychology which are treated in greater detail than in the general course with specific application to school practice. This course differs from the first type by the greater emphasis on psychological facts ~~that~~ on their application to the art of instruction.

5. Psychology of learning--an analysis of the various forms of learning and the factors conditioning the learning process.³⁶

The variety of approaches was further compounded when attempts were made to articulate the work in educational psychology with the work in general psychology. The content of general psychology, Henmon related, was more a function of the man who taught it and his point of view than anything else.

Finally, a way to begin assessing how educational research has shaped schooling and how the growth of schooling has shaped it--the relationship must be seen as reciprocal--could be through, for want of a better term at the present, what may be called a classics approach. It may be profitable to assemble a list of ten studies that seem to have made a difference. These would include individual studies, the body of work of individuals who produced a succession of studies, studies focused on issues, types of studies, and means of generating, organizing, and supporting studies. Each could be examined in terms of what it set out to accomplish, what it allegedly accomplished, and what problem(s) of schooling generated the initial questions. It could, and certainly should, be asked whether the studies signal the end or the beginning of a problem.

If fifteen such "studies" were to be chosen, the following ten may well be on the list:

1. The Thorndike-Woodworth studies of 1901 on the transfer of training. These seem to have generated considerable discussion about what may have been the wrong issue.³⁷ We need to certify that the record is correct. Was the issue faculty psychology, mental discipline, transfer of training or the content of the high school curriculum? If the issue was curriculum, then we have to ask why the Committee of Ten could not be taken on immediately. Why did the CRSE have to await the transfer of training issue to be settled?

2. Thorndike's work on arithmetic and the Thorndike-Barnhart dictionary. We need to ask and answer--even if we cannot do it quantitatively--about the

influence of a man or movement or whatever that effectively determines what words will be taught in a free society's schools. The importance of numbers in a capitalist society only needs to be iterated.

3. School surveys have been very well used by Callahan and more recently by Colin Greer. Surveys held a fascination for our predecessors that is not yet fully comprehended. For example, Thorndike was able to write of educational surveys as follows: "An educational survey of one state would seem to be at least as elaborate a task as a geological survey of a continent."³⁸

4. Cubberley's work on the apportionment of school funds (1906).³⁹ We have yet to look at how schoolmen sought to distribute funds and secure them during a period when the demand for social services in cities was increasing.

5. Joseph Mayer Rice's work needs further investigation. We have many repeated statements about his presentation of his spelling investigations to the Department of Superintendence in 1897 and his proposal for a national bureau of educational research in 1902. Whether there has been sufficient continuity in our history to warrant the claim that there is a line between Rice and the movement for national assessment in the 1960's needs study.⁴⁰ Whether his investigations of spelling instruction made a difference in classroom practice should be an interesting story.

6. The nature-nature arguments need to be examined not in terms of trying to determine who is psychologically or scientifically correct but in terms of how those arguments were reflected in the "principles of education" and educational psychology textbooks. There may also be a link between the nature-nature arguments and the number of overlooked studies on Negro education. Our history on this issue may be better than we think.

7. Merle Curti's Social Ideas of American Educators always warrants study. However, the question is whether this work is evidence of a movement away from what Cubberley would have seen as "education as a branch of political science" to pure political theory. That book and its origins seems to be right on the line.

8. The Herbartians as a group and as a movement need further treatment. Here the problem is not to show that they were not true to Herbart (they knew they were not and we should take their word for it) but to examine their work in terms of how they influenced our conception of teaching as it occurs in a public school. They gave us method and content for public school teaching. How long did it last?

9. The partial and scattered chronicles of both university and public school bureaus need to be brought together and made into a history. An up-to-date history of the rise and demise of these bureaus would look at the role of the "planning" concept as it moved from the Army to all of government and how it changed our views about how institutionalized research should be organized.⁴¹

10. The retardation and elimination studies need to be examined collectively and in their proper contexts. It may be that Ayers' Laggards in Our Schools (1909) is more than the application of bookkeeping and shallow science to school management. These studies may be instances, crude as they may be, of attempts

to find ways to insure a minimal level of service to all who use the schools and to have ways of monitoring whether all are getting what is rightfully theirs. To question variation from the norm need not be the destruction of the hearts and minds and spirits of the school youth. Rather, it may be an attempt--bureaucratic as it may be--to insure that each gets his share and chance.

NOTES

1. Lawrence A. Cremin's Transformation of the School (New York: Knopf, 1962) should be seen as an attempt to explain to the critics of American public education during the post WW II era, why the schools were as the critics claimed. The explanation was that educational theory became divorced from the academic disciplines. This explanation received widespread acceptance and was to have a considerable influence on how we conceptualized and acted upon the problems attendant to public schooling.

2. Raymond E. Callahan's Education and the Cult of Efficiency (Chicago: University of Chicago Press, 1962), like Cremin's Transformation, is also an attempt to deal with the post WW II critics of American public schools. He too seems to agree that the critics' claims are true. His explanation is, however, different. He relates how the school administrators, like the society as a whole, employed the legacy of F.W. Taylor, to management of the schools. His suggestion that school administrators be well trained in the social sciences is very close to Cremin's position in the Transformation.

3. Bernard Bailyn's Education in the Forming of American Society (New York: Vintage Books, 1960) and Lawrence A. Cremin's The Wonderful World of Ellwood Patterson Cubberley (New York: Bureau of Publications, Teachers College, Columbia University, 1965) are, of course, the two historiographical essays which most forcefully argued for having the historian of education attend to matters to which he usually did not consider his major responsibility.

4. Morris Janowitz, Institution Buildings in Urban Education (Russell Sage Foundation, 1969); pp. 8-9.

Even as late as 1948, the Assistant Commissioner for Research in the New York State Education Department was able to write that "ther provision of education through the thirteenth and fourteenth years for all youth at public expense is still an uncharted sea." See: J. Cayce Morrison, "The Role of Research in Educational Reconstruction," in The Forty-Fourth Yearbook of the NSSE: American Education in the Postwar Period, Part II, Structural Reorganization (Chicago: University of Chicago Press, 1948), p. 238.

5. Harry S. Broudy, The Real World of the Public Schools (New York: Harcourt Brace Jovanovich, Inc., 1972), pp. 20-38.

6. For a bibliography and review of the revisionists and neo-revisionists literature, see Marvin Lazerson, "Revisionism and American Educational History", Harvard Educational Review, Vol. 43, No. 2 (May, 1973).

7. Geraldine Joncich Clifford, "A History of the Impact of Research on Teaching", in Robert M.W. Travers (ed.) Second Handbook of Research on Teaching (Chicago: Rand McNally, 1973), p. 8.

8. Digest of Educational Statistics, 1973 ed. Department of HEW Publication No. (OE) 74-11103, p. 96.

9. Ibid., p. 85.

10. Neville Robertson and Jack K. Sistler, The Doctorate in Education: The Institutions (Bloomington, Indiana: PDK and AACTE, 1971), pp. 66, 24-25.

11. John S. Brubacher and S. Willis Rudy, Higher Education in Transition (New York: Harper and Row, 1958), p. 164.

12. David B. Tyack, The One Best System (Cambridge, Massachusetts, 1974), p. 183.

13. Ibid., p. 185.

14. Walter Scott Monroe, "Ten Years of Educational Research, 1918-1927", University of Illinois Bulletin, Vol. 25, No. 51. Bureau of Educational Research Bulletin, Vol. 42, 1928, p. 58.

Also see: B.A. Liu, Educational Research in Major American Cities (New York: Kings Crown Press, 1945) and Douglas E. Scates, "Organized Research in Education: National, State, City, and University Bureaus of Research", Review of Educational Research, Vol. IX, No. 5 (December, 1939).

15. Tyack, One Best System, p. 185.

16. Michael B. Katz, "From Theory to Survey in Graduate Schools of Education", Journal of Higher Education, Vol. XXXVII, No. 6 (June, 1966), p. 328.

17. Douglas E. Scates, "Research Bureaus", in Walter S. Monroe (ed.), Encyclopedia of Educational Research (New York: Macmillan, 1941), pp. 952-953.

18. Douglas E. Scates, "Research Bureaus", in Walter S. Monroe (ed.), Encyclopedia of Educational Research (New York: Macmillan, 1950, rev. ed.), p. 1032.

19. Gustav J. Froehlich, "Research Bureaus", in Chester W. Harris (ed.), Encyclopedia of Educational Research (New York: Macmillan, 1960, 3rd ed.), p. 1156.

20. Ibid.

21. Scates, "Research Bureaus (1950)", p. 1032.

22. Froehlich, "Research Bureaus (1960)", p. 1156.

23. Henry C. Johnson and Erwin V. Johanningmeier, Teachers for the Prairie (Urbana, Illinois: University of Illinois Press, 1972) pp. 182, 208-209.
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